

contacting the diaphragm there will be pleuritic symptoms.

The liver should not be punctured until leukocythemia, pernicious anemia and scurvy have been excluded. A solitary abscess may be endured for years until the liver is but a shell. It may be cured spontaneously by rupture and drainage through the diaphragm and respiratory tract, or into and through the alimentary tract.

2. Multiple Abscesses (Three Types).

Their path of infection varies:

(a) Suppurative cholangitis comes from the bile ducts, with small abscesses in the smaller bile ducts. The primary infection is usually associated with gall-stones, but may be due to parasites. Recently a nervous woman was operated upon for gall-stones. Following the cholecystectomy, she had the typical septicopyemic course, with right diaphragmatic pleurisy and a tender liver. Clinical diagnosis: "Postoperative liver suppuration." She has gone Christian Science for the time being.

(b) General septicemia and pyemia: Infection is through the blood stream. The onset of hepatic symptoms is sudden chills, fever, sweats, a painful and tender enlarged liver with slight jaundice, first noted in the sclera. If the infection is overwhelming, there will be no leukocytosis. The course is invariably fatal.

(c) Suppurative pylephlebitis: The infection in this group is in the area drained by the portal vein. In more than 50 per cent of these cases the primary focus is in the appendix. Rarer sites are piles and other rectal ills.

Numerous minute abscesses are present which, as time goes on, may coalesce, to produce a honeycomb appearance.

Differential diagnosis:

1. With empyema of the gall-bladder, jaundice is more common. It appears earlier and is more pronounced than in abscess. Unless the belly is too fat and the wall too tense, the swollen gall-bladder can be easily felt.

2. In intermittent hepatic fever there are periods of attacks of chills, fever and sweats, alternating with periods of fair health.

3. In syphilis of the liver the left lobe, as well as the right, is enlarged, the organ is nodular. There is often the history of chancre, and a positive Wassermann; and last, but not least, the therapeutic test.

4. Hydatid cyst of liver: Suppuration may occur, and that is an abscess.

5. Acute yellow atrophy, which is an advanced necrosis of all the liver cells, is characterized by jaundice, nervous symptoms, toxemia, and a small liver in the late stage.

CONCLUSIONS

Liver suppuration:

May be single or multiple.

It is always metastatic.

It is rarely diagnosed.

If multiple, it is fatal.

If single, the treatment is medical as well as surgical.

If multiple, the treatment is only palliative.

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CHEMICAL PERITONITIS

FOLLOWING INTRA-UTERINE INJECTION*

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REPORT OF CASE

MRS. H. B., a white woman of twenty-eight years with four children, was three days past her menstrual date. Upon the advice of a neighbor, she attempted to inject turpentine into the uterus, using a medicine dropper. The day before, she had tried turpentine on a tampon without any effect. The injection was followed immediately by severe pain in the right lower quadrant of the abdomen and low in the back. She used a plain water douche without relief, and in two hours the pain was so intense that a physician was called. He administered ether for one-half hour, gave morphine grain one-half, and called the ambulance.

The patient arrived at the Riverside County Hospital at 3 a. m., April 3, 1934. She was apparently suffering with severe pain in both lower quadrants of the abdomen, temperature 98.6 degrees, and pulse 128. There was marked abdominal tenderness and evidence of peritoneal irritation. There was no evidence of vaginal injury, but marked tenderness on bimanual examination. She was unable to void. At 8 a. m. she appeared to be more comfortable, following catheterization and application of ice to the lower abdomen. The urine showed a trace of albumen, and the blood count was 12,300 white cells, with 84 per cent polymorphonuclears. She was given sodium amylal grains six and slept for six hours, awakening with more severe pain and a temperature of 102 degrees. At that time there was some localization to the right side, beginning distention, and increasing polymorphonuclear leukocytosis. She was still unable to void. Expectant treatment was continued for another twenty-four hours, during which time all symptoms became more marked: pain uncontrolled by morphin; marked distention; a silent abdomen; restlessness; pulse, temperature, and leukocytes increasing, as indicated in Chart 1. There was no vomiting.

Faced with a patient in critical condition and an uncertain diagnosis, an exploratory laparotomy seemed indicated. This was done at 8:30 p. m., less than forty-eight hours after the onset, under spinal anesthesia. There was some preperitoneal edema and free fluid. The peritoneum was friable. The omentum showed some necrosis and was adhered to the pelvic organs by fresh adhesions. The abdominal cavity contained approximately a pint of serous fluid containing fibrin and some pus. There was a plastic exudate on the fundus of the uterus and both adnexa. The right fallopian tube was swollen twice the size of the left, and both were acutely inflamed. The uterus and cul-de-sac showed no evidence of trauma. The appendix was explored and found outside the inflammatory field. Both tubes and ovaries were removed and the abdomen closed with drains in the cul-de-sac.

The patient made an uneventful recovery, except for serous drainage during the first week. She was discharged in three weeks. Smears of the tissue removed showed no bacteria. Cultures of the abdominal fluid remained sterile. Urinalysis showed one gram of albumen with blood cells and casts on the first and second postoperative days, returning to normal at the end of a week.

An examination of the tissues removed showed that a corpus luteum in process of formation was present in one of the ovaries. The dilation noted in one of the fallopian tubes was due to exudate confined in it. This exudate was almost wholly serous. A light in-

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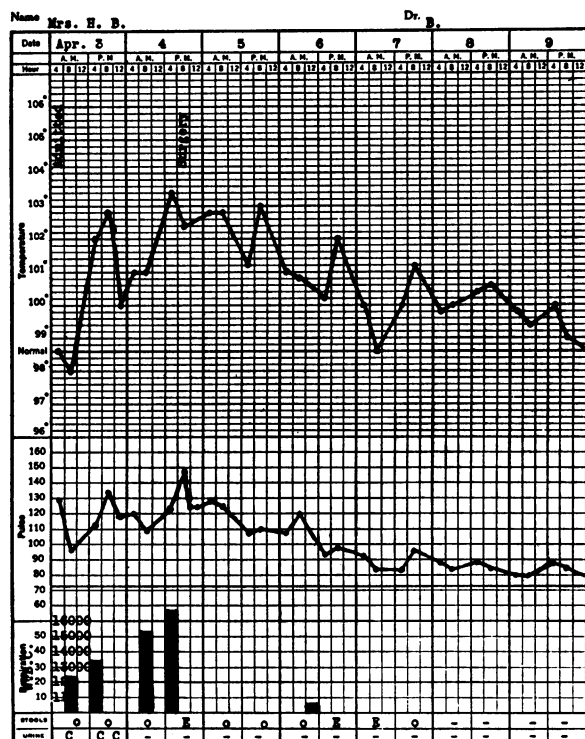


Chart. 1.—Pulse, temperature, and leucocyte record.

filtration of neutrophils and lymphocytes was present in the mucosa of the tube. A thin layer of very loose fibrinopurulent exudate was present on the external surfaces of the tubes and ovaries. The leukocytic content of this exudate was considerably less than is ordinarily seen in exudates when bacterial peritonitis is present. The exudate was undergoing organization, being already extensively invaded by fibroblasts.

COMMENT

The variety of methods used by the laity to produce abortion seem to be limited only by the number of agents in existence and the number of helpful neighbors. Upon admission, this patient appeared to be hysterical. Symptoms may have been masked by the large dose of morphin. As her condition became worse, chemical peritonitis was considered; but with the history of a small amount used, expectant treatment seemed advisable. A careful history appeared to eliminate the possibility of uterine or vaginal perforation. Acute salpingitis and ectopic pregnancy were considered because there was a history of an acute, transitory pain in the right side three days before. (What woman with four children in as many years does not have them?)

The diagnosis of chemical peritonitis may be debatable. A review of the literature shows that it is rarely made. The question of the patient's ability to inject anything into the cervix and uterus has been considered. The amount required to pass through the tubes into the abdominal cavity is small, known from radiographic procedures. Spasm of the uterus due to an irritant would reduce this amount. The onset and progress are compatible only with acute mechanical or chemical injury of a fallopian tube. The findings at operation and with the microscope were not those of septic peritonitis.

A search of the literature reveals no similar case. Peritonitis following intra-uterine injection of hypertonic saline to produce abortion is reported in the French literature by Bloch.¹ This patient recovered following total hysterectomy forty-eight hours later. No mention is made of bacteriology. The German literature² reports a second case which followed the use of soap solution, also with cure, following hysterectomy. Davis³ mentions chemical irritants as an etiologic agent in producing aseptic peritonitis. He advises surgical intervention when symptoms are marked. Two cases, with death and chemical analysis at autopsy, are reported: one,⁴ in 1869, followed the intra-uterine injection of "liquor ferri"; in the second,⁵ in 1878, a solution of lead acetate was used.

CONCLUSIONS

The diagnosis of chemical, aseptic peritonitis in this case is based on: (a) Sudden, rapid onset of severe symptoms immediately following an attempt to inject turpentine into the uterus; (b) operative findings and pathology; (c) negative bacteriology; (d) prompt recovery, following surgical drainage.

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1 Bloch, G.-C.: Generalized Peritonitis Following Criminal Abortion, *La Méd.*, Paris 8:7:522 (April), 1927.

2 Runge (abstract): Unusual Injury of the Gravid Uterus, *Deutsche Med. Wchnschr.*, 53:21:903 (May 20), 1927.

3 Davis, Carl Henry: Diseases of the Peritoneum, Gynecology and Obstetrics, 2:18:1. W. F. Prior Co., Hagerstown, 1933.

4 Von Haselberg: Death from Peritonitis Following Intra-uterine Injection, *Verhandl. d. Gesellsch. f. Geburtshilfe*, Berlin, 22:48, 1869.

5 Spath, E.: Peritonitis and Death Due to Injection of Lead Acetate Solution Through the Tubes into the Peritoneal Cavity, *Zentralbl. f. Gynak.*, 2:593, 1878.

Malpractice Protection.—The most cautious and conscientious doctor never knows when a disgruntled or scheming patient may sue him for malpractice. Although a doctor may be legally exonerated, his reputation inevitably suffers from the publicity. And the volume of such litigation, to the medical profession's alarm, constantly increases. Recently, in *Clinical Medicine and Surgery*, Dr. Isador Simon Trostler, Chicago roentgenologist, trotted out a few fundamental rules which, if scrupulously observed by doctors, he thought, might stem the tide of malpractice suits. Gist of his advice:

Never under any circumstances promise a cure or use language which might be construed as such a promise.

Be careful of diagnoses, and when there is doubt refrain from "affixing a label."

When calling a consultant select one who knows more than you do.

In surgical cases, in unfamiliar surroundings, see that a careful count of all sponges it kept all the time, and be sure that the count is verified before closing the incision.

If an operation is to be performed, have the patient, or his guardian, give consent in writing, or verbal consent in the presence of a witness.

Collect your fees when they are due. It is a well-recognized fact that many malpractice suits are started because physicians try to force payment from delinquent patients.

Do not become nervous. If things have gone wrong, do not inform the patient, his family or friends that an error has been committed. It is not necessary to misrepresent the condition, but it is easy to evade direct replies until you can determine the end-results.

Terminate your relations tactfully with patients who seem contentious or litigious.—*Time*, November 18, 1935.